## **CLAIMS**

## What is claimed is:

1. A method for evaluating system behavior of an application domain within a grid environment comprising the steps of:

identifying a host software object within said application domain; associating a software object with said host software object; within said associated software object, replicating host actions; recording said replicated actions;

moving said host software object from one grid within said grid environment to another grid; and,

responsively moving said associated software object in accordance with movement of said host software object.

- The method of claim 1, further comprising the step of: determining usage statistics for said application domain based at least in part upon said recorded actions;
- 3. The method of claim 2, said determining step further comprising the step of:

determining usage statistics for application domain features of said application domain.

- The method of claim 2, further comprising the step of:
   optimizing performance of said application domain based upon said usage
  statistics.
- 5. The method of claim 1, wherein said replicated actions are passive actions, said method further comprising the step of:

preventing said replicated actions from operationally executing in said grid environment.

6. The method of claim 1, further comprising the steps of:

determining a location for logging data that is external to said associated software object; and,

conveying said recorded replicated actions to said determined location.

7. The method of claim 1, further comprising the steps of:

disassociating said associated software object from said host software object; and,

associating said software object with a different host software object within said application domain.

- 8. The method of claim 1, further comprising the steps of:
  cloning said associated software object to create a copied object; and,
  associating said cloned object with a different host software object within
  said application domain.
- The method of claim 1, further comprising the steps of: selecting a plurality of host software objects within said application domain; and,

for each selected host software object, repeating said associating step, said replicating step, and said recording step.

10. A system for logging application domain information within a grid environment comprising:

an application domain that utilizes computing resources from a plurality of different grids in said grid environment;

at least one host software object configured to execute actions within said application domain, wherein different ones of said executed actions are executed within different grids of said grid environment; and,

at least one ghost agent configured to record said executed actions for an associated host software object.

- 11. The system of claim 10, wherein said at least one host software object comprises a plurality of host software objects, and wherein said at least one ghost agent comprises a plurality of said ghost agents.
- 12. The system of claim 11, further comprising: an application domain data store configured to receive messages from said ghost agents.
- 13. The system of claim 11, further comprising:
  an application analyzer configured to analyze application-specific data
  gathered by said ghost agents.
- 14. A ghost agent comprising:

a ghost log configured to record application-specific activities performed by a host software object;

a ghost identifier configured to identify said ghost agent to components within a grid environment; and,

a ghost controller for managing interactions between said ghost agent and said grid environment, wherein said ghost agent can move from grid to grid within said grid environment.

- The ghost agent of claim 14, further comprising:means for linking said ghost agent with said host software object.
- 16. The ghost agent of claim 14, further comprising: means for disassociating said ghost agent from said host software object; and,

means for linking said disassociated ghost agent to a different host software object.

17. A machine-readable storage having stored thereon, a computer program having a plurality of code sections, said code sections executable by a machine for causing the machine to perform the steps of:

identifying a host software object within said application domain; associating a software object with said host software object; within said associated software object, replicating host actions; recording said replicated actions;

moving said host software object from one grid within said grid environment to another grid; and,

responsively moving said associated software object in accordance with movement of said host software object.

- 18. The machine-readable storage of claim 17, further comprising the step of: determining usage statistics for said application domain based at least in part upon said recorded actions.
- 19. The machine-readable storage of claim 18, said determining step further comprising the step of:

determining usage statistics for application domain features of said application domain.

- 20. The machine-readable storage of claim 18, further comprising the step of: optimizing performance of said application domain based upon said usage statistics.
- 21. The machine-readable storage of claim 17, wherein said replicated actions are passive actions, said method further comprising the step of:

preventing said replicated actions from operationally executing in said grid environment.

22. The machine-readable storage of claim 17, further comprising the steps of:

determining a location for logging data that is external to said associated software object; and,

conveying said recorded replicated actions to said determined location.

23. The machine-readable storage of claim 17, further comprising the steps of:

disassociating said associated software object from said host software object; and,

associating said software object with a different host software object within said application domain.

24. The machine-readable storage of claim 17, further comprising the steps of:

cloning said associated software object to create a copied object; and, associating said cloned object with a different host software object within said application domain.

25. The machine-readable storage of claim 17, further comprising the steps of:

selecting a plurality of host software objects within said application domain; and,

for each selected host software object, repeating said associating step, said replicating step, and said recording step.

26. A system for evaluating system behavior of an application domain within a grid environment comprising the steps of:

means for identifying a host software object within said application domain;

means for associating a software object with said host software object; means for replicating host actions within said associated software object; means for recording said replicated actions;

means for moving said host software object from one grid within said grid environment to another grid; and,

means for responsively moving said associated software object in accordance with movement of said host software object.